

Amendments to the Claims:

Claims 1-27. (canceled)

Claim 28. (currently amended) A composition comprising:

an orally acceptable, tooth whitening peroxyacetic acid generating mixture including a source of hydrogen peroxide and an acetic acid ester of glycerin, wherein the source of hydrogen peroxide and the acetic acid ester of glycerin are dispersed within an orally acceptable anhydrous carrier.

Claim 29. (previously presented) The composition of claim 28 wherein the acetic acid ester of glycerin is selected from the group consisting of glyceryl triacetate, glyceryl diacetate and glyceryl acetate.

Claim 30. (currently amended) A composition according to claim 28, wherein the source of hydrogen peroxide is selected from the group consisting of carbamide peroxide, sodium percarbonate, sodium perborate, calcium peroxide, magnesium peroxide, sodium peroxide, and anhydrous poly(vinyl pyrrolidone)/hydrogen peroxide complexes.

Claim 31. (previously presented) A composition according to claim 28 capable of providing an oral pH of more than 5.2 to generate peroxyacetic acid.

Claim 32. (previously presented) A composition according to claim 31, wherein the oral pH is 7.8.

Claim 33. (currently amended) The composition of claim 28 wherein the orally acceptable anhydrous carrier is selected from the group consisting of glycerin, propylene glycol, polyethylene glycols, chewing gum and gum base products, floss carriers and floss wax products, mineral oils, vegetable oils, waxes and esters.

Claim 34. (currently amended) The composition of claim 28 ~~further comprising~~ wherein the orally acceptable anhydrous carrier comprises a thickening agent.

Claim 35. (currently amended) The composition of claim 34 wherein the thickening agent is selected from the group consisting of neutralized ~~carboxymethylene~~ carboxypolymethylene, polyacrylic acid polymers and copolymers, hydroxypropylcellulose and other cellulose ethers, salts of poly(methyl vinyl ether-co-maleic anhydride), poly(vinylpyrrolidone), poly(vinylpyrrolidone-co-vinyl acetate), silicon dioxide, fumed silica, and stearic acid esters.

Claim 36. (currently amended) The composition of claim 28 ~~further comprising~~ wherein the orally acceptable anhydrous carrier comprises a buffer.

Claim 37. (previously presented) The composition of claim 36 wherein the buffer is selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonium hydroxide, sodium phosphate di- and tri-basic, potassium phosphate di- and tri-basic, sodium tripolyphosphate, tris(hydroxymethyl)aminomethane, triethanolamine, polyethylenimine, polyacrylic acid, poly(methyl vinyl ether-co-maleic anhydride), citric acid, and phosphoric acid.

Claim 38. (currently amended) The composition of claim 28 ~~further comprising~~ wherein the orally acceptable anhydrous carrier comprises a surfactant.

Claim 39. (previously presented) The composition of claim 38 wherein the surfactant is selected from the group consisting of zwitterionic and fluorinated surfactants.

Claim 40. (currently amended) The composition of claim 28 ~~further comprising~~ wherein the orally acceptable anhydrous carrier comprises a chelating agent.

Claim 41. (previously presented) The composition of claim 40 wherein the chelating agent is selected from the group consisting of phosphonic acids, EDTA, and polyphosphates.

Claim 42. (currently amended) The composition of claim 28 ~~further comprising~~ wherein the orally acceptable anhydrous carrier comprises flavorants or sweeteners.

Claim 43. (previously presented) A composition for producing peroxyacetic acid for use in whitening teeth, the composition comprising a two component system including:

a first aqueous component including hydrogen peroxide and

a second component including glyceryl triacetate.

Claim 44. (currently amended) A method for whitening teeth comprising:

forming a composition having an oral pH in excess of about 5.2 by combining a ~~hydrogen peroxide precursor~~ source of hydrogen peroxide, glyceryl triacetate, and water so as to generate peroxyacetic acid; and

applying the composition to a tooth surface.

Claim 45. (currently amended) A method for whitening teeth comprising:

applying one of either a glyceryl triacetate or a ~~hydrogen peroxide relating compound~~ source of hydrogen peroxide onto a tooth surface; and

applying the other of the remaining glyceryl triacetate or ~~hydrogen peroxide relating compound~~ source of hydrogen peroxide onto the same tooth surface, so as to generate peroxyacetic acid upon contact with an aqueous solution on the surface of the tooth.

Claim 46. (currently amended) A method for whitening teeth comprising:

providing separately glyceryl triacetate and a ~~hydrogen peroxide releasing compound~~ source of hydrogen peroxide, both in an orally safe and sufficient amount for whitening teeth;

forming a mixture between the glyceryl triacetate and the ~~hydrogen peroxide releasing compound~~ source of hydrogen peroxide; and

applying the mixture onto a tooth surface.

Claim 47. (currently amended) A method for cosmetically treating teeth comprising the steps of:

- applying a source of labile acetyl groups onto the surface of a tooth;
- allowing the source of labile acetyl groups to penetrate into the tooth;
- applying a source of peroxide onto the surface of the tooth;
- allowing the source of labile acetyl groups to react with the source of hydrogen peroxide to generate a peroxyacid within the tooth; and
- allowing the peroxyacid to effect whitening of the tooth.

Claim 48. (previously presented) The method of claim 47 wherein the source of labile acetyl groups is a C1-C5 molecule having between 1 to 5 labile C1-C5 acyl containing groups.

Claim 49. (previously presented) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight less than 1000.

Claim 50. (previously presented) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight less than 500.

Claim 51. (previously presented) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight of between about 100 to about 300.

Claim 52. (previously presented) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight approximate that of glyceryl triacetate.

Claim 53. (currently amended) An oral care composition for whitening teeth comprising:
a peroxyacetic acid-generating mixture including a source of hydrogen peroxide and a source of labile acyl groups dispersed within an anhydrous carrier, wherein the carrier comprises a thickening agent consisting of polyvinylpyrrolidone.

Claims 54-58. (canceled)

Claim 59. (new) A composition for whitening teeth in an oral cavity comprising:
a source of hydrogen peroxide in an amount that results in about 0.1 % to about 15.0% of hydrogen peroxide when applied to the oral cavity;
an acetic acid ester of glycerin in an amount of about 0.1 % to about 6.0%; and
an orally acceptable anhydrous carrier in an amount of about 79.0 % to about 99.8%;
wherein the percentages are weight to weight of the composition.

Claim 60. (new) The composition of claim 59 wherein the acetic acid ester of glycerin is selected from the group consisting of glyceryl triacetate, glyceryl diacetate and glyceryl acetate.

Claim 61. (new) A composition according to claim 59, wherein the source of hydrogen peroxide is selected from the group consisting of carbamide peroxide, sodium percarbonate, sodium perborate, calcium peroxide, magnesium peroxide, sodium peroxide, and anhydrous poly(vinyl pyrrolidone)/hydrogen peroxide complexes.

Claim 62. (new) The composition of claim 59, wherein the orally acceptable anhydrous carrier is selected from the group consisting of glycerin, propylene glycol, polyethylene glycols, chewing gum and gum base products, floss carriers and floss wax products, mineral oils, vegetable oils, waxes and esters.

Claim 63. (new) The composition of claim 59, wherein the orally acceptable anhydrous carrier comprises a thickening agent in an amount of about 0.5 to about 20.0%.

Claim 64. (new) The composition of claim 63, wherein the thickening agent is selected from the group consisting of neutralized carboxypolymethylene, polyacrylic acid polymers and copolymers, hydroxypropylcellulose and other cellulose ethers, salts of poly(methyl vinyl ether-co-maleic anhydride), poly(vinylpyrrolidone), poly(vinylpyrrolidone-co-vinyl acetate), silicon dioxide, fumed silica, and stearic acid esters.

Claim 65. (new) The composition of claim 59, wherein the orally acceptable anhydrous carrier comprises a buffer in an amount of about 0.5% to about 3.0%.

Claim 66. (new) The composition of claim 65, wherein the buffer is selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonium hydroxide, sodium phosphate di- and tri-basic, potassium phosphate di- and tri-basic, sodium tripolyphosphate, tris(hydroxymethyl)aminomethane, triethanolamine, polyethylenimine, polyacrylic acid, poly(methyl vinyl ether-co-maleic anhydride), citric acid, and phosphoric acid.

Claim 67. (new) The composition of claim 59, wherein the orally acceptable anhydrous carrier comprises a surfactant in an amount of about 0.1% to about 2.0%.

Claim 68. (new) The composition of claim 67, wherein the surfactant is selected from the group consisting of zwitterionic and fluorinated surfactants.

Claim 69. (new) The composition of claim 59, wherein the orally acceptable anhydrous carrier comprises a chelating agent in an amount of about 0.01% to about 5.0%.

Claim 70. (new) The composition of claim 69, wherein the chelating agent is selected from the group consisting of phosphonic acids, EDTA, and polyphosphates.

Claim 71. (new) The composition of claim 58, wherein the orally acceptable anhydrous carrier comprises flavorants or sweeteners in an amount of about 0.05% to about 1.5%.

Claim 72. (new) The composition of claim 60, wherein the acetic acid ester of glycerin comprises glyceryl triacetate in an amount of about 6.0%.

Claim 73. (new) A multi-chamber vessel, comprising:

a first chamber having a first formulation comprising a source of hydrogen peroxide wherein the first formulation is substantially free of an acetic acid ester of glycerin; and

a second chamber having a second formulation comprising an acetic acid ester of glycerin and wherein the second formulation is substantially free of the source of hydrogen peroxide.

Claim 74. (new) The multi-chamber vessel of claim 73, further comprising a single exit.

Claim 75. (new) The multi-chamber vessel of claim 74, further comprising a mixer, wherein applying pressure to the vessel forces material from the chambers through the mixer to form a single mixture emerging from the single exit in the vessel.

Claim 76. (new) The multi-chamber vessel of claim 73, wherein the first chamber further comprises an anhydrous carrier.

Claim 77. (new) The multi-chamber vessel of claim 73, wherein the second chamber further comprises an anhydrous carrier.

Claim 78. (new) The multi-chamber vessel of claim 73, wherein the source of hydrogen peroxide is selected from the group consisting of hydrogen peroxide, carbamide peroxide, sodium percarbonate, sodium perborate, calcium peroxide, magnesium peroxide, sodium peroxide, and anhydrous poly(vinyl pyrrolidone)/hydrogen peroxide complexes.

Claim 79. (new) The composition of claim 73, wherein the acetic acid ester of glycerin is selected from the group consisting of glyceryl triacetate, glyceryl diacetate and glyceryl acetate.